

JA



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,380	11/13/2001	Dnyanesh Talpade	S13.12-0116	2877
7590	03/23/2005		EXAMINER	
Joseph R. Kelly WESTMAN CHAMPLIN & KELLY Suite 1600-International Centre 900 South Second Avenue Minneapolis, MN 55402-3319			JUNG, WILLIAM C	
			ART UNIT	PAPER NUMBER
			3737	
DATE MAILED: 03/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,380

Applicant(s)

TALPADE ET AL.

Examiner

William Jung

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-26 is/are allowed.
- 6) ☒ Claim(s) 1, 6-21, and 27-38 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20092004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 30-38 are rejected under 35 U.S.C. 102(b) as being anticipated by *Lardo et al* (US 6,675,033).

Claims 30-38: Lardo et al disclose an intravascular device, comprising an elongate catheter having an elongate shaft with a proximal end and a distal end, an antenna formed of conductive material electroplated on a distal region of the elongate shaft; and a first elongate conductor and a second elongate conductor, the first and second elongate conductors extending from a proximal region of the elongate member to a distal region thereof and at least one of the first and second elongate conductors being electrically connected to the antenna. Furthermore, Lardo et al disclose an intravascular device comprising an elongate member, and a braid disposed on at least a portion of the elongate member, the braid including at least two braid strands wherein at least one of the braid strands forms a part of an electrical circuit including a transmission line and an antenna (col. 4, lines 10-40; col. 8, line 64 – col. 9, line 24; col. 10, lines 65-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 6-9, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lardo et al* in view of *Schulte et al* (US 5,269,319).

Lardo et al substantially disclose of all claimed features in claims 1, 6-9, 27, and 29.

Claims 1 and 6-9: Lardo et al disclose an elongated intravascular device adapted to be advanced through a vessel of a subject, the device consisting of an elongated electrical conductor, a first electrically conductive layer disposed coaxially to the elongated electrical conductor, at least one dielectric layer disposed between the elongated electrical conductor and the first electrically conductive layer, and an electrically conductive coil, a first end of the coil being electrically coupled to the elongated electrical conductor and a second end of the coil being electrically coupled to the first electrically conductive layer, wherein a circuit comprising the elongated electrical conductor, the electrically conductive layer, the dielectric layer and the coil forms an impedance-matching circuit. The structure described above is housed in a catheter or probe with guide wire to control the movement of the catheter (col. 4, lines 10-40; col. 6, lines 5-23; col. 6, lines 50-60). However, Lardo et al do not teach electrically conductive coil. For intravascular catheter, it is well known that electrically conductive coil is used in intravascular dielectric catheter as demonstrated by Schulte et al where a cardioversion means advantageously includes distal and proximal cardioversion electrodes in the form of flexible, electrically

Art Unit: 3737

conductive coils (col. 3, lines 50-52). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Schulte et al to Lardo et al to achieve the claimed invention.

Claims 27 and 29: In addition to features described above, Lardo et al disclose a second dielectric layer disposed on top of the primary shield layer, a secondary shield layer comprised of an electrically conductive polymer disposed on top of the second dielectric layer, a first electrical short coupling the primary shield layer to the secondary shield layer at a first longitudinal position along the elongated electrical conductor, a second electrical short coupling the primary shield layer to the secondary shield layer at a second longitudinal position, distal of the first longitudinal position, along the elongated electrical conductor; and a non-electrically-conductive gap in the secondary shield layer at a longitudinal position just proximal of the second electrical short (col. 4, lines 10-40; col. 12, lines 41-66).

6. Claims 10, 14-16, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lardo et al* and *Schulte et al* in view of *Higgins et al* (5,902,251).

Lardo et al and Schulte et al substantially disclose of all claimed features in claims 10, 14-16, and 18-21. Lardo et al disclose an elongated intravascular device adapted to be advanced through a vessel of a subject, the device consisting of an elongated electrical conductor, a first electrically conductive layer disposed coaxially to the elongated electrical conductor, at least one dielectric layer disposed between the elongated electrical conductor and the first electrically conductive layer, and an electrically conductive coil, a first end of the coil being electrically coupled to the elongated electrical conductor and a second end of the coil being electrically coupled to the first electrically conductive layer, wherein a circuit comprising the elongated

Art Unit: 3737

electrical conductor, the electrically conductive layer, the dielectric layer and the coil forms an impedance-matching circuit. The structure described above is housed in a catheter or probe with guide wire to control the movement of the catheter (col. 4, lines 10-40; col. 6, lines 5-23; col. 6, lines 50-60). However, Lardo et al do not teach electrically conductive coil or expandable catheter. For intravascular catheter, it is well known that electrically conductive coil is used in intravascular dielectric catheter as demonstrated by Schulte et al where a cardioversion means advantageously includes distal and proximal cardioversion electrodes in the form of flexible, electrically conductive coils (col. 3, lines 50-52). Higgins et al disclose a catheter where the catheter is made of expandable material such as polytetrafluoroethylene. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Schulte et al and Higgins et al to Lardo et al to achieve the claimed invention.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Lardo et al* and *Schulte et al* as applied to claim 27 above, and further in view of *Jenkins* (US 5,109,859).

Lardo et al and Schulte et al substantially disclose all claimed features in claim 28. However, Lardo et al and Schulte et al do not explicitly anticipate the intravascular device where the compressible dielectric material is air or air filled porous material. In addition, Lardo et al do not explicitly anticipate intravascular device consisting a balloon or a wave-guide. Jenkins teaches that an intravascular catheter device includes expandable balloon. Dielectric material filled with air through porous material and the tip of the catheter includes wave-guide. Furthermore, figure 4B shows that insertion guides 20 and 26 where multiple insertable guide is introduced while the imaging guide 36 monitors the wave-guides 20 and 26. Therefore, it would

Art Unit: 3737

have been obvious to one of ordinary skill in the art at the time the invention was made to improve the intravascular catheter by applying well known Jenkins's device of using wave-guide and balloon structure combined with multiple wave-guide insertion to Lardo et al and Schulte et al's apparatus to achieve the claimed invention.

8. Claims 11, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lardo et al*, *Schulte et al*, and *Higgins et al* as applied to claim 10 above, and further in view of *Jenkins*.

Lardo et al, Schulte et al, and Higgins et al substantially disclose all claimed features in claims 11, 12, 17, 23, and 28. However, Lardo et al, Schulte et al, and Higgins et al do not explicitly anticipate the intravascular device where the compressible dielectric material is air or air filled porous material. In addition, Lardo et al do not explicitly anticipate intravascular device consisting a balloon or a wave-guide. Jenkins teaches that an intravascular catheter device includes expandable balloon. Dielectric material filled with air through porous material and the tip of the catheter includes wave-guide. Furthermore, figure 4B shows that insertion guides 20 and 26 where multiple insertable guide is introduced while the imaging guide 36 monitors the wave-guides 20 and 26. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the intravascular catheter by applying well known Jenkins's device of using wave-guide and balloon structure combined with multiple wave-guide insertion to Lardo et al' apparatus to achieve the claimed invention.

Art Unit: 3737

Allowable Subject Matter

9. Claims 2-5 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


10. Claims 22-26 allowed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


March 21, 2005


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700